Object Oriented Programming, Exercise 6

Topics: Inheritance

Make a Git commit at least after every coding task.

Code in Python3 and follow the style guide.

1. Explain the following terms:
    a. Super class
    b. Sub class
    c. Base class
    d. Derived class
    e. "Is a" relationship
2. Draw a UML diagram of task 3. **Use UML syntax and see how data attributes and methods are presented in the example presented on class (about Automobile), can be found on lecture slides. You can use any software or e.g. draw by hand and take a picture.** Example in lectures is drawn using MS Visio.
3. Inherit some animals from the Mammal class (that you created in Exercise 4). Add data attribute for the noise the animal makes and the diet they have. Display your objects on screen (= Print out the state of each object (use str-method)).
4. Draw a UML diagram of exercise 5. Use UML syntax and see how data attributes and methods are presented in the example presented on class (about Automobile etc.).
5. Change your task 3 code like this: Inherit a domestic animal from Mammal. Also inherit a wild animal from Mammal. Then inherit a few domestic and wild animals from those classes and print them out. Each mammal should make unique noise and have a certain diet as additional data attributes. Add some relevant attributes. Display your objects on screen.
6. Draw a UML diagram of tasks 7. Use UML syntax and see how data attributes and methods are presented in the example presented on class (about Automobile etc.).
7. Inherit a student and teacher from a participant of OOP course. Think a few proper data attributes that are 1) common for both teachers and students and 2) different between teachers and students.
8. Each participant of Task 7 has also 1 domestic animal and 1 wild animal. Display the teachers, students and their information.